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RUTLAND WALLIS, MICHAEL	

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROY M. ZEIGHAMI, BRIAN M. JOHNSON,
STUART C. HADEN, and CHRISTIAN L. BELADY

Appeal 2009-1795
Application 10/725,720
Technology Center 2800

Decided:[1] May 13, 2009

Before KENNETH W. HAIRSTON, ROBERT E. NAPPI, and BRADLEY W. BAUMEISTER, *Administrative Patent Judges.*

BAUMEISTER, *Administrative Patent Judge.*

DECISION ON APPEAL

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[1] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 (2002) from the Examiner's rejection of claims 7 and 8. Claims 9-11 have been indicated as containing allowable subject matter.[2] We have jurisdiction under 35 U.S.C. § 6(b) (2002). We affirm.

A. Appellants' invention

Appellants' invention relates to a method for supplying power to an electronic load from a plurality of parallel-connected power supplies (Br. 6).

B. The claims

Independent claim 7 is representative.[3] It reads as follows:

> 7. A method for supplying power to an electronic load comprising:
>
> connecting a plurality of power supplies in parallel;
>
> setting, via a power selector circuit, a maximum effective voltage for *each of* said plurality of power supplies to cascade from a highest effective voltage for a first of said plurality to a lowest effective voltage for a last of said plurality; and
>
> interfacing said plurality of power supplies with said electronic load through said power selector circuit.

(emphasis added).

[2] *See* Ans. 2-3 (withdrawing the rejection of claims 9 and 10).
[3] Appellants argue claims 7 and 8 together as a group. *See* Br. 8-9. Accordingly, we select independent claim 7 as representative.

C. The references and rejections

The Examiner relies on the following prior art references to show unpatentability:

Foerster	US 3,600,598	Aug. 17, 1971

Claims 7 and 8 stand rejected under 35 U.S.C. § 102(b) as anticipated by Foerster.[4]

Rather than repeat the arguments of Appellants or the Examiner, we refer to the Brief and the Answer for their respective details.[5] In this decision, we have considered only those arguments actually made by Appellants. Arguments which Appellants could have made but did not make in the Brief have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

ISSUE

Appellants assert that Foerster does not teach every element of claim 7 because Foerster's redistribution of electrical current due to load changes does not set or change the voltages of any of the power supply modules: PS1'-PS4' (Br. 8-9).

The Examiner admits that Foerster's power selector circuit does not change or set the maximum effective voltages for each of the individual power supplies, but nonetheless finds that Foerster anticipates claim 7 (Ans. 5). The Examiner's rationale is that claim 7 merely requires that the voltage

[4] The obviousness rejection of claim 7 based upon Lethellier in view of Henze has been withdrawn (Ans. 3).
[5] We refer to (1) the Appeal Brief filed Aug. 15, 2007; and (2) the Examiner's Answer mailed Oct. 17, 2007, throughout this opinion.

and power level seen by the load are changed or set, and that claim 7 does not require the voltage of the supply itself to be changed or set (Ans. 5).

The issue before us, then, is whether Appellants have shown that the Examiner erred in finding that Foerster discloses that the power selector circuit sets a maximum effective voltage for *each of* said plurality of power supplies.

FINDINGS OF FACT

The record supports the following Findings of Fact (FF) by a preponderance of the evidence:

1. Figure 2 of Foerster depicts power selector circuitry that includes wiring that electrically interconnects the outputs of power supplies, PS1'-PS4', and the transformer 20 (Foerster, fig. 2).
2. Segments of Foerster's wiring system are disposed adjacent to the respective power supplies' outputs, upstream of any parallel-connections (Foerster, fig. 2).
3. The resistance of a wire is a function of the wire's length and area. Specifically, $R=\rho*L/A$; where R is resistance; and ρ, L, and A are a material's resistivity, length, and area, respectively (http://hyperphysics.phy-astr.gsu.edu/hbase/electric/resis.html).

PRINCIPLES OF LAW

1. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior

art reference." *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987).

2. Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006).

ANALYSIS

We need not decide whether the Examiner's broad interpretation of claim 7 is reasonable. Instead, we find that the Examiner erred in initially concluding that Foerster's power selector circuit does not change or set the maximum effective voltages for each of the individual power supplies.

Appellants' Specification provides examples of what may constitute the claim language, "setting, via a power selector circuit, a maximum effective voltage for each of said plurality of power supplies." For example:

> [0015] FIGURE 2 is a block diagram illustrating another embodiment of power supply module 20 configured according to the teachings herein. Power supply module 20 includes bulk power supplies 200-202 each carrying a maximum output voltage of 50 V. Power supply module 20 is, therefore, homogenous. Homogenous power supply module 20 may also be used in a system in a manner as described herein by connecting to load 21 through power selector circuit 22. Power selector circuit 22 includes voltage selecting resistors R1-R6. By selecting the values of R1-R6 at the design stage, the effective voltage supplied to load 21 may be selected with bulk power supplies 200-202 each having the same raw maximum voltage output. When each of power supplies 200-202 are connected to power selector circuit 22, R1 generally reduces the effective voltage seen at diode 203, R3 generally reduces the effective voltage seen at diode 204, and R5 generally reduces the effective voltage seen at diode 205. With the proper

> selection of R1, R3, and R5, the effective voltage output for power supplies 200-202 may be selected at or tuned to the desired cascading values, such as 48.5V, 48.4V, and 48.3V. By creating the stepped voltage supply from homogenous power supply module 20, various embodiments of the power supply system described herein may be implemented.
>
> [0016] It should be noted that the voltage-selecting circuit shown in FIGURE 2 is only one example embodiment for creating a stepped effective voltage in power supply module 20. Other methods for creating a voltage drop between any one of power supplies 200-202 and diodes 203-205 may be used.

(Spec. ¶¶ [0015]-[0016]).

Restated, the Specification explains that the claim language—"setting, via a power selector circuit, a maximum effective voltage for each of said plurality of power supplies"—reads on the act of selecting, at the time of the circuit design, the resistance of the electrical interconnections between the various power supplies and the power selector circuit that are upstream of any parallel connection (Spec. ¶ [0015]).

Figure 2 of Foerster depicts power selector circuitry that includes wiring that electrically interconnects the outputs of power supplies, PS1'-PS4', and the transformer 20 (FF 1).[6] Segments of this power-selector-circuitry wiring are disposed adjacent to the respective power supplies' outputs, upstream of any parallel-connections (FF 2).

[6] Appellants do not dispute the general proposition that Foerster's transformer, in combination with the associated wiring that interconnects the power supplies to the various loads, may be interpreted as constituting power selector circuitry.

One of ordinary skill in the art would understand that Foerster's depicted wiring would be composed of conventionally-used resistive conductors, such as copper- or aluminum-based conductors—not superconductors. As such, the voltage reaching any of the loads—i.e., the maximum effective voltage—would necessarily be lower than the power supplies' respective maximum voltages. One of ordinary skill in the art would also understand that physically constructing Foerster's circuit requires that the wiring layout first be designed (FF 1-3). Further, as the resistance of each of these wires is a function of the respective wires' lengths and areas (FF 3), designing the circuit's wiring layout implicitly requires designing the wires' respective resistances. *See In re Preda*, 401 F.2d 825, 826 (CCPA 1968) (noting that "in considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom").

Restated, one of ordinary skill in the art would understand that the wiring of any given power selector circuit inherently possesses an associated resistance. This is so regardless of whether a schematic drawing of the power selector circuit positively depicts the resistance as a discrete component (such as in Appellants' Figure 2) or not (such as in Foerster's Figure 2). *See In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990) (noting that there is no *ipsissimis verbis* test for determining whether a reference discloses a claim element, i.e., identity of terminology is not required).

To summarize, Appellants' only contention on appeal is that Foerster's redistribution of electrical current due to load changes does not set

or change the voltages of any of the power supply modules PS1'-PS4' (Br. 8-9). However, the wiring adjacent to the output of Foerster's power supplies may be interpreted as being part of a power selector circuit. This wiring has an associated resistance. This resistance changes or "sets" the maximum effective voltage for each of the power supplies. As such, Foerster does, in fact, disclose the claim limitation relating to the setting of the maximum effective voltage for each of the power supplies. For the foregoing reasons, Appellants have not persuaded us of error in the Examiner's anticipation rejection of representative claim 7. Accordingly, we will affirm the Examiner's rejection of that claim and dependent claim 8 which falls with claim 7.

CONCLUSION OF LAW

Appellants have not shown that the Examiner erred in finding that Foerster discloses that the power selector circuit sets a maximum effective voltage for each of said plurality of power supplies. Accordingly, Appellants have not shown that the Examiner erred in rejecting claims 7 and 8 under §102.

DECISION

We sustain the Examiner's rejections with respect to all pending claims on appeal. Therefore, the Examiner's rejection of claims 7 and 8 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

babc

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